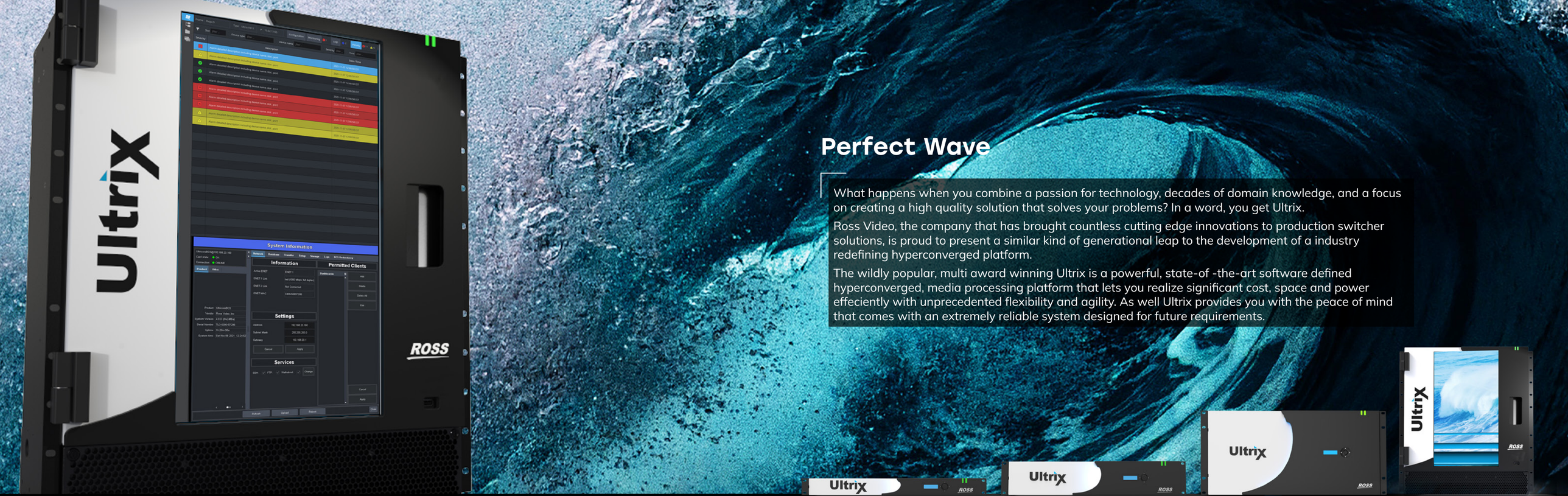
Ultrix

One platform,
endless configurations.

ROSS



Perfect Wave

What happens when you combine a passion for technology, decades of domain knowledge, and a focus on creating a high quality solution that solves your problems? In a word, you get Ultrix.

Ross Video, the company that has brought countless cutting edge innovations to production switcher solutions, is proud to present a similar kind of generational leap to the development of a industry redefining hyperconverged platform.

The wildly popular, multi award winning Ultrix is a powerful, state-of -the-art software defined hyperconverged, media processing platform that lets you realize significant cost, space and power effeciently with unprecedented flexibility and agility. As well Ultrix provides you with the peace of mind that comes with an extremely reliable system designed for future requirements.

2019 WINNER PRODUCT INNOVATION AWARD

ULTRIX • ULTRICORE • ULTRITOUCH

AWARD WINNING

CONNECTIVITY & CONTROL

Ultrix

Ultrix is so much more than a traditional routing platform, it's infrastructure in a box! Ranging in sizes from 16x16 to 288x288 in a single chassis, to significantly larger in distributed architectures. The compact design of Ultrix provides big performance in little space. Its small footprint makes Ultrix a natural fit for space conscious applications like Mobile Production. Its integrated Ultricore control system provides users a great way to configure, monitor, and control Ultrix via both Software and Hardware panels that scale based on budget and size.

And software defined means users can enable the functionality they need - MultiViewer, framesyncs, clean/quiet switches, etc - when they need it without losing critical time occupying scarce I/O slots.

Like all good stories, there is so much more to Ultrix than simple video routing - Ultra-Powerful. Ultra-Fast. Ultra-Cool.

Software Defined
Easily add new features through additional software licenses. No additional hardware is required.

Save Money
Because of its size, base feature set, and software capabilities, owners save significant money on upfront capital costs. Additionally, the advanced architecture provides significant ROI in terms of power, cooling, shipping, and space costs.

Hyperconverged Design
Ultrix is infrastructure in a box. Video/audio routing, multiviewers, production switchers, video and audio processing, frame synchronizers, clean/quiet switching, UHD gearboxing, virtual audio mixing, and more all unified in one single chassis.

Pay as you go
The software defined architecture means you simply buy what you need, when you need it. No need to make critical design decisions upfront, simply add appropriate functions when they are required.

12G Ready
Ultrix natively supports 12G throughout the entire chassis. This means it's ready for UHD production when you are, without replacing any hardware or losing capacity.

Intelligent
Introducing the smart door. Incredibly powerful, stunningly beautiful. System monitoring, troubleshooting, configuration, and control. All at your fingertips with an integrated, gorgeous high resolution, full size touchscreen panel. Yet one more innovation in the world's most hyperconverged platform. * FR12 only.

All In.

Ultra Powerful

Ultrix is a compact, but incredibly powerful processing platform capable of fast and accurate video routing, clean/quiet switching of audio along with video signals from SD to 12G, with advanced audio routing and processing as standard functions. All of this processing power is available whether you are working in baseband, all IP, or hybrid environments ensuring Ultrix is ready for the rapidly evolving topologies that you may need to implement. The unique design permits users to software license additional capabilities such as adding integrated MultiViewers, frame synchronizers, video/audio processing, audio mixing and 12G I/O. No special hardware is required for any of these capabilities. In addition, the revolutionary SDPE board allows you to add either Acuity or Carbonite switchers directly inside the frame. Robust hardware, along with the implementation of Ross Video's Software Defined Hyperconverged Production strategy means a platform that will grow with your needs.

ULTRIX · ULTRICORE · ULTRITOUCH

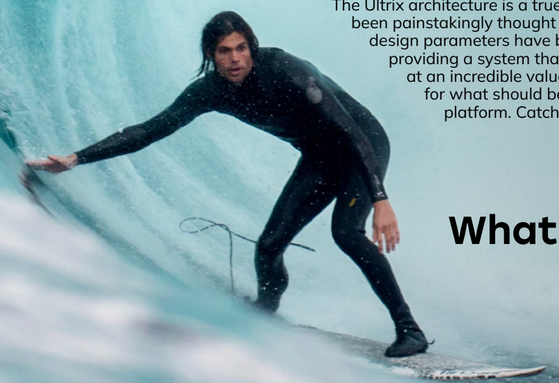
AWARD WINNING

CONNECTIVITY & CONTROL

An epic force that will impress

Every so often a system emerges that has been designed to redefine what is possible and changes how things are done. Ultrix was conceived to bring sophisticated features and extensive function integration that improve performance and to simplify system deployment.

The Ultrix architecture is a true game changer. Every detail has been painstakingly thought out and reviewed. High speed design parameters have been pushed to the maximum, providing a system that offers a leading edge feature set at an incredible value. The Ultrix platform sets the bar for what should be expected in a modern processing platform. Catch the new wave. Ultrix.



What's inside will inspire.

Highly Intelligent Smart Door

The Ultrix FR12 features a first-of-its-kind, incredibly powerful, yet stunningly beautiful, high-resolution smart door. Designed to improve engineering efficiency the integrated, full-size touchscreen is password protected and comes with pre-configured panels that deliver lightning-fast system monitoring, troubleshooting, configuration and control. Because It's Dashboard enabled, it also allows customers to create application specific custom panels to enhance and tailor functionality even more.

Alarming

- Priority view of System alarms
- Configurable severity and hysteresis
- Sortable
- Quick link to port/function by click

Monitoring

- Confidence monitoring for both input and output

Control

- PB routing control
- Configurable
- AFV and breakaway

Configuration

- Quick access to individual ports
- Signal status of all ports on a board
- Heads up alarm notifications
- Parametric control

Ultrix I/O Cards

Ultrix platforms are built with a modular input and output matrix, to easily swap in unique I/O cards that build upon the Ultrix feature set. All these cards are compatible with each other on a single chassis and allow you to customize your Ultrix Connectivity Platform to serve as a 12G-capable Router, Multiviewer, and Signal Processing Platform, a hybrid-IP switcher, or a signal-processing hub.

Ultrix HDX-IO Cards

The core I/O board for the Ultrix family provides unparalleled power and performance for signal routing, processing, and multiviewers for baseband audio, as well as video signals from 270Mb/s to 12Gb/s:

- 12G capable on every port
- Full TDM audio processing, embedding, and deembedding standard
- Clean/Quiet Switching on every output standard
- Enhance performance via software licensing features such as Multiviewers, framesyncs, SRC, and more

Ultrix IPX-IO Cards

Ultrix IP-IO cards introduce IP streams to the Ultrix platform, while maintaining all the powerful features and licensing capabilities of the HDB-IO cards:

- Hybrid,SDI or IP, build what you need
- SMPTE-2110 transport standard

Ultrix MODX-IO Cards

The latest board for the Ultrix family provides unparalleled power and performance for signal routing, processing, and multiviewers for baseband audio, as well as video signals from 270Mb/s to 12Gb/s using modular SFP transceiver cages:

- Choose from a mix of fiber, coax, and HDMI SFP's
- Full TDM audio processing, embedding, and deembedding standard
- Clean/quiet switching on every output standard
- Enhance performance via software licensing features such as Multiviewers, framesyncs, SRC, and more

Ultrix SDPE Blade

The SDPE blade is a powerful enhancement to the Ultrix Hyperconverged platform. It can be configured to be either an Ultrix-Acuity or Ultrix-Carbonite production switcher solution. Combined with the inherent capabilities of Ultrix, this combination creates a powerful production solution of integrated routing, signal processing, multiviewers, and switching.

- Each blade provides a complete multi-format, multi-ME production switcher solution.
- Available in either a 2RU, 5RU, or 12RU chassis
- Ultrix SDI, IP, and SFP I/O boards can be mixed in the same frame
- Designed and engineered to be easily repurposed or updated
- Power, cooling, maintenance and support costs are significantly lowered.
- Operational ease of use, flexible functionality, and integrated control

Ultrispeed

12G Performance Available Through Every Signal Path

Ultrix provides maximum performance and quality with standard configurations supporting data rates up to 3G. Users can purchase Ultrispeed software license that enable 12G performance throughout every signal path within the router. 12G is the standard for single link UHD (4K) SDI routing.

The patented technology that produced the Ultrispeed license enables Gearbox functionality which converts to/from quad link 3G 2 Sample Interleave (2SI) UHD (4K) signals for integration with some types of non-12G 4K equipment.

Software License That Enables High Speed Data Rates Within The Frame

- Supports the Next Generation of SDI Signals!
- From SD to Single-Link 12G
- 3G standard & up to 12G with Ultrispeed SW upgrade
- Improved pathological performance using advanced processing and signal integrity capabilities
- Gearbox capability
- 1 Terabit switching capacity per RU positions the platform perfectly for the hybrid facilities today and in the future
- License is purchased per frame

Gearbox Features

- Supports both multi-link and single-link SDI
  - 12G or Combination of multi-link and single-link
- Enabled with Ultrispeed SW license
- Converts between Quad-Link 3G 2 Sample Interleave (2SI) and 12G SDI

Ultrispeed

Ultriscape

Software Defined MultiViewer Integration

Ultriscape is the first software defined MultiViewer. No special output boards, crosspoints, or multichannel connection cables are needed. Simply enable the desired number of outputs to drive the monitors required, and route any input to whatever MultiViewer head is chosen.

- Up to 6 MultiViewer heads can be enabled in 1RU
- Up to 12 MultiViewer heads in a 2RU
- Up to 27 MultiViewer heads in a 5RU chassis
- Up to 48 MultiViewer heads in 12RU chassis

This makes Ultriscape the most compact solution currently available. Because MultiViewer outputs can be assigned to both standard HD BNC or SFP outputs, users have the flexibility to choose the output type they need for each monitor, thus eliminating the hassle of matching traditional MultiViewer outputs to the monitors being driven. Low latency, metering, tally, and UMD support via standard protocols make for easy integration into existing facilities.

Key Features

- Up to 6 MultiViewer heads in 1RU, 12 MultiViewer heads in 2RU, or 27 MultiViewer heads in 5RU, or 48 MultiViewer heads in 12RU.
- Can use standard HD-BNC I/O, SMPTE 2110, SFP I/O, or AUX ports
- SFP output design permits users to choose output format (HDMI, SDI, FIBER...)
- Each Ultriscape license enables 1 MultiViewer head
- Fast (<1 frame latency)
- Video input support for signals from SD up to single link 12G in either baseband or SMPTE 2110 formats
- Flexible layout configurations to meet a wide range of applications
- Multiple output formats that are configurable by the user
- 2 System PiP's from an array of choices plus a single use 3rd scaler PiP per layout
- 100 non blocking PiP's per MultiViewer output
- Integrated audio metering with customizable look and feel
- Multiple tally indicators including borders, lamps, and label UMDs
- Tally support TSL 3.1, and 5.0 native
- Simple control and configuration
- Configure / update a single or multiple MultiViewers across many frames quickly using DashBoard
- Tight integration with router database
- Simultaneous access to all router inputs
- Customizable layouts
- Recall layouts from router hardware and software panels, and via third party automation systems
- Multiple modes of operation including direct PIP control and destination follow
- Industry leading image quality with award winning Ross scaling technology
- Video/Audio alarms and closed caption decoding

Ultriscape

Ultrimix

Audio Integration And Processing

In another industry first, Ultrimix provides advanced audio integration and processing, including the ability to embed and de-embed audio on all of the inputs and outputs of the router, as well as route discrete audio, all standard in every frame. No special hardware, crosspoints, or I/O boards are required, as with other systems. Users have complete flexibility to process, swap, sum, mute, or route any discrete or embedded audio input to any output. This is an enormous amount of audio.

- Up to 768x768 in 1RU,
- Up to 1536x1536 in 2RU
- Up to 3456x3456 in 5RU
- Up to 6144x6144 in 12RU

This means Ultrix has enough channels for even the most demanding audio operations. Ultrimix is perfect for applications where audio is constantly changing, and it can be added as needed without throwing away any initial investment in the system.

Key Features

- Complete non blocking audio support
- Route and process both embedded and discrete audio.
  - Up to 768x768 channels in 1RU
  - Up to 1536x1536 channels in 2RU
  - Up to 3456x3456 channels in 5RU
  - Up to 6144x6144 in 12RU
- Full audio processing
  - Level Adjust, Sum, Invert, Tone Insertion (on outputs)
- Ease of operation
  - Standard and custom control panels available within Dashboard
  - Control and switching via standard SW and HW router control panels
- Discrete audio via MADI I/O
  - Support for up to 64 channels per MADI stream
  - AES and Analog audio support via external breakout box
  - Support for SMPTE 2110-30
  - Control just like any discrete audio signal with full processing

Ultrimix-MXR

Software Enabled Virtual Audio Mixer

To enhance the Ultrimix audio smart fabric even more, Ultrix has also introduced the world's first software-enabled audio mixer in a router platform: Ultrimix-MXR.

Ultrimix-MXR is a virtual audio mixer that can be configured up to 128x64. It is partitionable into smaller mixers so you can have multiple instances within the frame. It is also fully routable which means not only does it have access to every input in the system, but its outputs can be sent to any output in the frame, providing tremendous flexibility for audio workflows. Each input has a 4-band parametric equalizer, noise gate and compressor/limiter. In addition, Ultrimix-MXR has 128 direct outputs for simple audio processing as part of its standard feature set. It is controllable via a beautiful DashBoard user interface as well as wizard-based application-specific panels for both the 2RU and 4RU Ultritouch hardware control panels.

Key Features

- Licensed in 32x16 blocks. Multiple licenses can be purchase to build a maximum size of 128x64
- 128 Direct outs
- 4 Band Parametric EQ per input
- Noise Gate per input
- Compression/Limiter per input
- Dashboard control
- Ultritouch-2 and Ultritouch-4 panel support

Ultrimix

Ultricore

Full Featured Control System

Great hardware is only as good as the control system running it. Ultricore is a full featured control system that significantly reduces setup time, simplifies configuration, and enhances the user experience by providing powerful, yet intuitive workflows and interfaces that make operations run smoothly.

Ultricore is standard on all Ultrix frames except for the FR12. Integrated control is great for small systems as it does not require the use of a central controller. For larger or more sophisticated systems, the Ultricore BCS central controller is available to provide for greater client integration as well as enhanced control and connectivity capabilities.

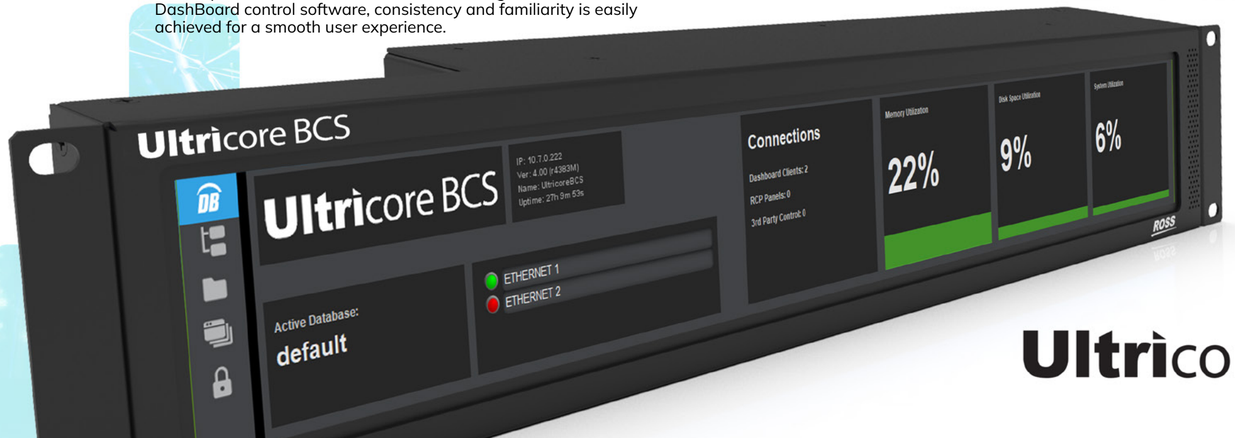
When interoperability is required, reliable third party integration is assured by the ability to interface with industry standard protocols (GV Native / Probel SW-P-08), optional NV-9000, Ember+ logical/physical routing control, and others, and by providing redundant physical communications links over serial, Ethernet, and interfaces.

Ultricore can interface with existing Ross NK series routers. Organizations currently using Ross routing systems can integrate new Ultrix frames within their facilities easily, as well as reuse current NK control panels. Because the Ultricore UI is integrated with the Ross DashBoard control software, consistency and familiarity is easily achieved for a smooth user experience.

Key Features

- **System Discovery and Setup**
  - Walkabout system discovery tool
  - Configure device communication settings
  - Establish server profiles
  - Perform identifications
  - Check network performance links and status and locate devices
- **Router and MultiViewer Database and Canvas Configuration**
  - Create router and Ultriscape MultiViewer configurations with the database editing tool
  - Create, change, and update sophisticated mappings, and source/destination groupings that are available to all control clients within the system
- **Enhanced operational tools - Series of standard software panels**
  - Ability to create custom panels
  - Monitoring, mapping matrices, and adjusting parameter adjustments are easy with a powerful, intuitive frame view
  - Custom user profiles
- **Hardware feature set**
  - 2 Ethernet ports, 2 Serial
  - Optional redundant power

Ultricore - rear



Ultricore

Ultrisync

Software Defined Frame syncs

Ultrisync is a software defined frame sync feature that can be assigned to any video input on the system. Ultrisync assures consistent timing for sources, and guarantees audio processing, including SRC up to 48Khz on all inputs perfect for taming wild input feeds to house reference within the facility or flypack. As an example of one of many uses, when used with Ultriclean enabled outputs, Ultrisync licensed inputs guarantee that signals fall within a timing window for clean switch applications. Licenses available for single or multiple inputs, and can act as floating licenses that affect whatever inputs are desired. The function can be applied to every input in the chassis, and with data rates of 3G and below- the entire frame can be populated. This software feature is much more cost effective than having to use an external frame sync.

Key Features

- Software enable frame syncs
- Up to 36 Frame syncs in 1RU, up to 72 Frame syncs in 2RU, up to 160 Frame syncs in 5RU, up to 288 frame syncs in 12RU
- Audio SRC for all embedded channels
- Support for signals from SD to 3G on all ports. On ULTRIX-HDX-IO and ULTRIX-MODX-IO boards up to 16 ports can support 12G framesyncs
- Simple enable/disable via checkbox
- Input timing status
- Up to 500 milliseconds of variable delay per mono channel
- Frame syncs are standard with ULTRIX-IPX-IO
  - No SRC
  - Support for data rates from 1.5G to 12G on all ports.

Ultrisync

Ultriclean

Clean / Quiet Switching

Ultriclean is the world's first video clean switch to support switching of data rates up to 12G. Ultriclean offers completely clean video switching on a per output port basis that guarantees glitch free video, and quiet switch audio routing. Other routers cannot offer this and require dedicated, special hardware with complex systemization that must be planned in advance, which only makes Ultrix even more cost effective. Key applications for Ultriclean are master control bypass, as well as for situations where disruption of a source signal can cause downstream equipment to relock like monitors, downstream encoders, and others.

Key Features

- Up to 36 Clean switches in 1RU
- Up to 72 Clean switches in 2RU
- Up to 160 Clean switches in 5RU
- Up to 288 Clean switches in 12RU
- Works in SD/HD/3G/12G
- Scales to offer as many outputs as needed – even up to 100% clean outputs
- Variable timing delay
- Easy setup and operation
- No manual timing steps required – automatically detects delay and adjusts appropriately to maintain clean switching
- When combined with Ultrimix, also provides 'Quiet' switching for embedded audio during a video switch

Ultriclean

Ultriproc

Procamp, Color Correction and SDR↔HDR Conversion

Ultriproc is a collection of tools commonly used for production. Ultriproc transforms your workflow by offering an unprecedented level of integration within the Ultrix ecosystem:

- Procamp: black offset, gain, saturation, hue
- RGB color correction
- Color space conversion: BT 709↔BT 2020
- Direct mapping SDR↔HDR conversion

Adjustments to the look and feel of content are handled with ease within Ultrix, providing the ability to maintain visual consistency across different scenes, shots or entire productions. Creative teams are empowered with quick access to real-time modifications and the freedom to experiment, enabling them to realize consistency and their desired aesthetic vision with greater precision and creativity.

Key Features

- Available as per-port or bulk licenses - license only as many ports as needed, when you need them
- Convert any to any SDR, HDR and WCG standard including HLG, PQ, S.Log3, BT 2022 and BT 709
- Automatic SMPTE 352 detection and re-authoring
- True broadcast-grade, high quality processing and conversion
- Simple, user-friendly control via DashBoard and Ultritouch control panels
- Ultimate streamlining of implementation and operational workflows
- Ultriproc may be applied to up to 8 inputs or outputs per ULTRIX-HDX-IO or ULTRIX-MODX-IO card for processing signals up to 3G, or up to 4 inputs or outputs per card for processing signals up to 12G

Ultriproc

Ultristream

Multiviewer Distribution using NDI

Ultristream enables facilities to extend Ultrix Ultriscape multiviewer outputs utilizing integrated NDI encoding, entirely bypassing the need for external converters. For editors, operators, managers, or producers, Ultristream revolutionizes accessibility to multiviewers, transforming them from centralized viewing screens to resources that can be easily distributed wherever they find utility. Moreover, decoding can be done on various devices - from laptops to large displays, offering the freedom to choose the most suitable device depending on the situation. Information is vital to successful production and broadcast operations, and Ultristream makes distributing real-time monitoring more effortless than ever before.

Key Features

- Fully integrated within the Ultrix system, removing the need for external converters.
- Supports NDI-equipped displays, hardware converters or software for decoding.
- With the use of traditional IP GbE networks, NDI eliminates the dependence on broadcast infrastructures for conveyance.
- Compatible with Ultrix FR1-NS, FR2-NS, FR5, and FR12, provided they are equipped with ULTRIX-HDX-IO and/or ULTRIX-MODX-IO cards along with Ultriscape licenses.
- Enables extension of one Ultriscape multiviewer per ULTRIX-HDX-IO or ULTRIX-MODX-IO card.
- Multiviewer output encoded at 1080P 50, 59.94 or 60 FPS.
- Provides both rUDP and Multicast transport (selectable), with the ability for Multistream Unicast to up to 7 destinations.
- GbE copper physical interface via RJ45 SFP+ installed in AUX D port.
- Easy setup using DashBoard.

Ultristream

Ultripower

External 1 RU power supply

Ultripower is a rack-mountable fully redundant power supply. In environments where equipment ruggedness, security, and maximum space savings are critical, Ultripower is a great fit. Rack-mountable, shallow, as well as easy to access and maintain, it is perfect for things like flypacks, OB Production, or equipment rooms where rack space is at a premium. Ultripower is also able to power multiple Ultrix chassis from a single system. One Ultripower chassis can provide redundant power for up to (4) 1RU Ultrix frames, or (2) 2RU Ultrix frames or (1) Ultrix 5RU frame. Ultrix-FR12 frames require (2) 1RU Ultripower chassis.

DashBoard control and monitoring software can be used to configure, actively control, and monitor all key parameters of the device. In addition, Ultripower has three LED indicators on each power supply module to identity key alarm and power presence.

Key Features

- 1RU external, rack-mountable power supply
- Front loading, hot swappable, redundant 1200W power supplies
- Power up to (4) 1RU Ultrix, and (2) 2RU Ultrix or (1) 5RU Ultrix with redundant power
- Ultrix-FR12 frames require (2) 1RU Ultripower chassis.
- Adjustable rack ears
- Control/Monitoring over Ethernet via Dashboard
- LED indicators for Fan & Power

Ultricool

External 1 RU cooling system

Smart, directional 1RU rack mount fully redundant cooling system to compliment equipment thermal performance when in extreme conditions or in confined spaces. Unit can be configured to provide directional airflow from front to back, front to right side, or front to left side depending on equipment requirements.

Key Features

User Changeable Directional Airflow
Users can change airflow patterns from front to left or front to right or front to back to enable use with a wide range of equipment when in confined spaces or extreme thermal environments.

Control Friendly
Control via Dashboard, Rosstalk, as well as an integrated “smart” bonded mode with Ultrix provides many ways to control fan speed. In addition front panel control with lockout is available.

Consistent Operating Conditions
Ever needed to rack a bunch of high powered equipment in a tight case in scorching desert heat at high altitude during production? Well, some of our customers do, and we wanted to see if we could design something to help out. Ultricool manages airflow to provide a consistent operating condition in extreme environments. This gives means equipment stays at a constant operating temperature to ensure performance.

Control Panels

Ultricore offers highly flexible, yet simple and intuitive control panels, that can be configured to operate as an X-Y, cut-bus or multi-cutbus panel. Every control panel in the system can be independently configured to meet the needs of the particular operator position at which it is deployed.

Ultritouch

Ultritouch is a family of powerful system control panels from Ross Video that is totally customizable and has been designed around you. The panels come in 2RU and 4RU rack-mountable touchscreen that builds on the functionality of traditional control products by adapting to your workflows, and it features a user interface that has more in common with a modern smartphone than a broadcast control panel. The magic of Ultritouch lies in its powerful Smart Touch capabilities. Ultritouch supports Ross Video's DashBoard platform natively, giving users unlimited flexibility to build panels that meet their working needs without any restrictions on numbers of buttons, button placement or display windows.

Smart Touch was developed to address the growing need for control surfaces that support traditional functionality but also offer greater levels of customization for the very precise and complex workflows of our most demanding customers. At its heart, Ultritouch features a full version of DashBoard – Ross Video's open control platform – which enables users to:

- Control a wide range of Ross products including production switchers, XPression graphics, Overdrive APC, openGear and Ross Routing systems, among others.
- Quickly change between panel styles and layouts, maximizing the usability of the panel and making your operations more efficient.
- Create and import custom panels
- NDI stream monitoring

In addition, Ultritouch combined with Ultrix routers gives users a tremendous amount of flexibility and advanced power including:

- Quick setup using the Ultricore soft panel wizard
- Custom panel layouts using flexible Windows and Drawers based on user preference
- Button per source, Cat/Idx, Grouping, Favorites, Advanced Statusing, Salvo operations and more
- Destination follow monitoring with video using NDI streaming direct on the panel
- A multiviewer control panel that allows for control of layouts, pips, and pip behavior. This graphics intensive panel simplifies use and makes it very easy to control large amounts of multiviewers from a single control surface.

Key Features

- 2RU and 4RU Touch-enabled Dashboard based RCP
- Shallow depth(2.5") with sideways connector layout (to maximize leg room in desk applications)
- Redundant Power Supply (optional)
- Integrated Speakers for monitoring (future application)
- HDMI & USB ports
- System wide discovery via Walkabout
- Dashboard based for easy & fast configuration
- Full control of most Ross Products - Routers, Multi-viewers, Switchers, Graphics, APC, Processing Platforms, and more
- Dashboard tree & system management support
- Ability to store multiple panel types with intuitive navigation based on desired workflow
- Fast Reboot and control for mission critical operations
- Seamlessly fits into the current Ross control ecosystem
- Backed by famous Ross support

RCP-ME

The RCP-ME is an Ethernet-based panel, which means ease of configuration and flexible control architectures. When combined with the NK-NET, the NK-ME panel offers users the most redundant communications set up for small systems in the industry.

The RCP-ME has button programmability including source, destination, breakaway, level select, macro, protect, take and panel lock, as well as a backlit 16×2 LCD display for display of source and destination names, system warnings and errors.

Key Features

- 40 fully illuminated LED backlit buttons
- Backlit 16×2 LCD display
- Ethernet connectivity
- Ability to connect to primary and backup IP addresses for control re-dun-dancy
- Slim design: 1RU, depth 4.4cm
- Full function, programmable control panel
- Configurable as cut-bus, multi-cutbus or menu driven source / destination switching control panel
- Control up to 32 levels
- Removable keycaps for labeling of button functions using transparent inserts
- Universal power supply included

RCP-QE

The RCP-QE Series offers unmatched flexibility and ease of use. They are ideal for use in OB vans or production houses where configurations change regularly, and are equally useful in studios where unlimited configurations enable fast and simple customized setups of each panel.

Ethernet-based connectivity means ease of configuration, and provides for flexible control architectures. The RCP-QE Series remote control panel offers 18 or 36 colored backlit graphic LCD keys with multiple menus, enabling users to easily navigate through the system with just a few key presses.

Key Features

- 18 (RCP-QE18) or 36 (RCP-QE36) backlit graphic LCD keys
- 8 programmable function keys
- Slim design: 1RU, depth 4.4cm
- Ethernet based control
- Ability to connect to primary and backup IP addresses for control re-dun-dancy
- Full function, programmable control panel
- Menu driven and single key configurations
- Unique multi-level menu programming
- Configure with DashBoard Control System
- Universal power supply included
- 5-year transferable warranty

Ultrix has been singularly designed to optimize signal integrity and performance to set a new standard in reliability.

It is also designed to lessen the stress of choosing advanced I/O capabilities when making such a significant capital expenditure. Software licensing provides users an easy path forward to add features as they need them, without having to scrap hardware that cannot be used anymore. With Ultrix, users move to advanced workflow requirements at their own pace and growth rate.

Redundant external power

Redundant Ethernet ports

Multi-use USB
USB to Serial for 3rd party interface

Dual or looping reference inputs

Wide array of I/O and Processing board options:
-HD-BNC
-IP
-SFP

Aux I/O
- For Video (BNC, Fiber, HDMI, IP)
  Discrete audio I/O MADI over Fiber or Coax

Ultrix 5RU

Ultrix 12RU

Ultrix 2RU

Ultrix 1RU

* Optional SFP MADI I/O available to support up to 384x384 per slot.
** Each license enables up to 12G support on all I/O per slot.

Hardware Specifications

Ultrix Hardware Specifications	1RU	2RU	5RU	12RU
PHYSICAL DIMENSIONS				
Width	17.5 inches	17.5 inches	17.5 inches	17.5 inches
Depth	7.9 inches	7.9 inches	7.9 inches	7.9 inches
Height	1.74 inches	3.48 inches	8.7 inches	21 inches
Frame Weight (approx)	4.06 kg (9 lbs)	5.44 kg (12lbs)	6.35 kg (14 lbs)	34.47 kg (76 lbs)
I/O Card Weight (approx per board)	1.36 kg (3 lbs)	1.36 kg (3 lbs)	1.36 kg (3 lbs)	1.36 kg (3 lbs)
Video Matrix Size (max)	36x36	72x72	160x160	288x288
Default I/O Slots	1 (16x16 HD BNC + 2AUX I/O Ports)	1 (16x16 HD BNC + 2AUX I/O Ports)	None	None
Optional I/O Slots using ULTRIX-HDX-IO	1 (16x16 HD BNC + 2AUX I/O Ports)	3 (16x16 HD BNC + 2AUX I/O Ports)	9 (16x16 HD BNC + 2AUX I/O Ports) slots 1-8; FLEX slot 16x16 HD BNC only	16 (16x16 HD BNC + 2AUX I/O Ports)
Optional I/O Slots using ULTRIX-IP-IO	1 (x4 25G SFP28 + 2 SFP I/O Ports)	3 (x4 25G SFP28 + 2 SFP I/O Ports)	9 (x4 25G SFP28 + 2 SFP I/O Ports)	16 (x4 25G SFP28 + 2 SFP I/O Ports)
Optional I/O Slots using ULTRIX-MODX-IO	1 (16 SFP ports + 2AUX I/O Ports)	3 (16 SFP ports + 2AUX I/O Ports)	9 (16 SFP ports + 2AUX I/O Ports) slots 1-8; FLEX slot 16 SFP ports only	16 (16 SFP ports + 2AUX I/O Ports)
Audio Matrix Size (with Optional MADI SFP's)	768x768	1536x1536	3456x3456	6144x6144
Ultriscape MV Head License per Slot	3 SDI or 2 IP	3 SDI or 2 IP	3 SDI or 2 IP	3 SDI or 2 IP
Maximum Ultriscape MV heads per System	6 SDI or 2 IP	12 SDI or 6 IP	27 SDI or 18 IP	48 SDI or 32 IP
UHD licenses per Frame	1	1	1	1
Maximum UHD Gearboxes per System	7 in / 7 out	15 in / 15 out	36 in / 36 out	64 in/64 out if using all ULTRIX-HDX-IO cards
Maximum number of 3Gb/s input frame syncs per system	36	72	160	288
Maximum number of 12 Gb/s input frame syncs per system (Using ULTRIX-HDX-IO and ULTRIX-MODX-IO)	19	51	128	256
Maximum number of 12Gb/s clean/quiet outputs per system	36	72	160	288
Maximum size of Ultrimix-MXR audio mixer	128x64	128x64	128x64	128x64
OTHER				
PSU	1 external brick	2 external bricks	1RU external frame	(x2) 1RU external frame
Optional Redundant PSU (additional)	1 external brick	2 external bricks	1 external brick	2 external bricks
Ultripower support	Optional	Optional	Standard	Standard
Fan Module	1	2	5	10
INPUT SPECIFICATION-ULTRIX-HDX-IO				
Standard Input	HD BNC	HD BNC	HD BNC	HD BNC
Signal Type	SDI Formats 270 Mb/s 1.5 Gb/s 3.0 Gb/s 12 Gb/s	SDI Formats 270 Mb/s 1.5 Gb/s 3.0 Gb/s 12 Gb/s	SDI Formats 270 Mb/s 1.5 Gb/s 3.0 Gb/s 12 Gb/s	SDI Formats 270 Mb/s 1.5 Gb/s 3.0 Gb/s 12 Gb/s
Impedance	75 Ohm	75 Ohm	75 Ohm	75 Ohm
Max Input Level	800 mV	800 mV	800mV	800mV
Return Loss	Per SMPTE 2082-1	Per SMPTE 2082-1	Per SMPTE 2082-1	Per SMPTE 2082-1
Equalization (typical)	UHD 60M, 3G 180M, HD 200M, SD 400M	UHD 60M, 3G 180M, HD 200M, SD 400M	UHD 60M, 3G 180M, HD 200M, SD 400M	UHD 60M, 3G 180M, HD 200M, SD 400M
SFP Aux Connector	optional	optional	optional	optional

Hardware Specifications

Ultrix Hardware Specifications	1RU	2RU	5RU	12RU
EMBEDDED AUDIO SPECIFICATIONS				
Audio Channels per I/O	16	16	16	16
OUTPUT SPECIFICATION-ULTRIX-HDX-IO				
Standard Output	HD-BNC	HD-BNC	HD BNC	HD BNC
Signal Type	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s	1.5 Gb/s or 3.0 Gb/s
Impedance	75 Ohm	75 Ohm	75 Ohm	75 Ohm
Amplitude	800mV +/- 10%	800mV +/- 10%	800mV +/- 10%	800mV +/- 10%
Rise & Fall Time	270 MB/s: 400-800ps 1.5 & 3GB/s: < 135ps 12GB/s: <45ps	270 MB/s: 400-800ps 1.5 & 3GB/s: < 135ps 12GB/s: <45ps	270 MB/s: 400-800ps 1.5 & 3GB/s: < 135ps 12GB/s: <45ps	270Mb/s: 400-800ps, 1.5 & 3Gb/s: <135ps, 12Gb/s: <45ps
DC Offset	0.0V +/- 10%	0.0V +/- 10%	0.0V +/- 10%	0.0V +/- 10%
Overshoot	< 10%	< 10%	< 10%	< 10%
Jitter	<0.2UI Alignment (up to 3G) <0.3 UI Alignment (12G) <.2UI Timing (up to 270M) <1UI Timing (1.5G) <2UI Timing (3G & 12G)	<0.2UI Alignment (up to 3G) <0.3 UI Alignment (12G) <.2UI Timing (up to 270M) <1UI Timing (1.5G) <2UI Timing (3G & 12G)	<0.2UI Alignment (up to 3G) <0.3 UI Alignment (12G) <.2UI Timing (up to 270M) <1UI Timing (1.5G) <2UI Timing (3G & 12G)	<0.2 UI Alignment (up to 3G), <0.3 UI Alignment (12G), <2UI Timing (up to 270M), <1UI Timing (1.5G), <2UI Timing (3G, 12G)
Return Loss	Per SMPTE 2082-1	Per SMPTE 2082-1	Per SMPTE 2082-1	Per SMPTE 2082-1
SFP Aux Connector	optional	optional	optional	optional
CARD SPECIFICATION-ULTRIX-IPX-IO				
Standard Output	(4) 100GE QSFP28	(4) 100GE QSFP28	(4) 100GE QSFP28	(4) 100GE QSFP28
Video Streams per Card	UHD: 8+8 redundant, 6G: 8+8 redundant, 3G/HD: 16+16 redundant	UHD: 8+8 redundant, 6G: 8+8 redundant, 3G/HD: 16+16 redundant	UHD: 8+8 redundant, 6G: 8+8 redundant, 3G/HD: 16+16 redundant	UHD: 8+8 redundant, 6G: 8+8 redundant, 3G/HD: 16+16 redundant
Video Format Support	• 720p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 1080i 50 / 59.94 / 60 • 1080p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 2160p 25/ 29.97/ 30/ 50 / 59.94/60	• 720p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 1080i 50 / 59.94 / 60 • 1080p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 2160p 25/ 29.97/ 30/ 50 / 59.94/60	• 720p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 1080i 50 / 59.94 / 60 • 1080p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 2160p 25/ 29.97/ 30/ 50 / 59.94/60	• 720p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 1080i 50 / 59.94 / 60 • 1080p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 2160p 25/ 29.97/ 30/ 50 / 59.94/60
IP Transport Standard Support	• SMPTE ST 2110 suite, including: -10, System Timing and Definitions -20, Uncompressed Active Video -30, PCM Digital Audio -40, ANC Data	• SMPTE ST 2110 suite, including: -10, System Timing and Definitions -20, Uncompressed Active Video -30, PCM Digital Audio -40, ANC Data	• SMPTE ST 2110 suite, including: -10, System Timing and Definitions -20, Uncompressed Active Video -30, PCM Digital Audio -40, ANC Data	• SMPTE ST 2110 suite, including: -10, System Timing and Definitions -20, Uncompressed Active Video -30, PCM Digital Audio -40, ANC Data
System Timing and Reference	PTP Slave (SMPTE 2059, AES67 and IEEE-1588 default profiles)	PTP Slave (SMPTE 2059, AES67 and IEEE-1588 default profiles)	PTP Slave (SMPTE 2059, AES67 and IEEE-1588 default profiles)	PTP Slave (SMPTE 2059, AES67 and IEEE-1588 default profiles)
Control and Setup	• NMOS IS-04 and IS-05 for AIMS-compliant discovery, registration and connection control • EmBER+ discovery, registration and connection control from popular 3rd-party control systems • Provisioning and monitoring via DashBoard and/or our published JSON API	• NMOS IS-04 and IS-05 for AIMS-compliant discovery, registration and connection control • EmBER+ discovery, registration and connection control from popular 3rd-party control systems • Provisioning and monitoring via DashBoard and/or our published JSON API	• NMOS IS-04 and IS-05 for AIMS-compliant discovery, registration and connection control • EmBER+ discovery, registration and connection control from popular 3rd-party control systems • Provisioning and monitoring via DashBoard and/or our published JSON API	• NMOS IS-04 and IS-05 for AIMS-compliant discovery, registration and connection control • EmBER+ discovery, registration and connection control from popular 3rd-party control systems • Provisioning and monitoring via DashBoard and/or our published JSON API
Frame Support	ULTRIX-NS, ULTRIX-FR12, and ULTRIX-5RU	ULTRIX-NS, ULTRIX-FR12, and ULTRIX-5RU	ULTRIX-NS, ULTRIX-FR12, and ULTRIX-5RU	ULTRIX-NS, ULTRIX-FR12, and ULTRIX-5RU
INPUT/OUTPUT SPECIFICATION ULTRIX-SFP-IO				
Number of SFP cages	4 Bidirectional SFP cages	4 Bidirectional SFP cages	4 Bidirectional SFP cages	4 Bidirectional SFP cages
SDI Support	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s
SFP Support	Optical SDI, HDBNC SDI	Optical SDI, HDBNC SDI	Optical SDI, HDBNC SDI	Optical SDI, HDBNC SDI
Compliance	MSA/Non MSA configurable	MSA/Non MSA configurable	MSA/Non MSA configurable	MSA/Non MSA configurable
I/O specification	See SFP Manufacturer spec sheet for I/O specification	See SFP Manufacturer spec sheet for I/O specification	See SFP Manufacturer spec sheet for I/O specification	See SFP Manufacturer spec sheet for I/O specification

Ultrix

Ross Video has a complete range of technical services available to ensure that your Ultrix installation is a success.

Operational Training can be provided at Ross Video, on-site, or on the web. Experienced Ross operators will teach your staff to get the most out of your new system and enhance your productions.

Commissioning is a service to help get your production system properly configured, connected, and installed. This service is performed by factory-trained Ross technical staff.

Technical Training can be provided at Ross Video, on-site, or over the web. Technical training will teach your engineering staff the technical details of the system you have purchased. System configuration, interfaces, databases, and routine maintenance procedures are some of the topics covered.

Ultrix comes standard with a 1 year comprehensive warranty. Extended Warranties on hardware and software maintenance are available for an annual fee.

Technical advice is available on-line, by telephone, or email to Ross Video – Included for the life of your system.

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Ross Video

Solutions
Broadcast & Production
Augmented Reality & Virtual Sets
Sport & Live Events
Legislative
Mobile Production
House of Worship
Education
Corporate

Products
Production Switchers
Motion Graphics & Clip Servers
Replay & Production Servers
Robotic & Camera Systems
Control Systems
Routing Infrastructure
Signal Processing Infrastructure
News, Live & Social Production Management
Asset Management & Storage

Services
Creative Services
Mobile Production

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